

Last name _____

First name _____

LARSON—MATH 350—CLASSROOM WORKSHEET 21
Integers and Primes

Review

- What does it mean for integer a to *divide* integer b (that is, $a|b$)?
- What is a *prime* number?
- If a, b are integers and $b = aq + r$ (for integers q, r with $0 \leq r < a$), what are q and r called?
- **(Claim:)** Every positive integer can be written as the product of primes.
- **(Claim:)** Every positive integer can be written *uniquely* as the product of primes.

New

1. **(Claim:)** $\sqrt{2}$ is irrational.

2. (**Claim:**) There are infinitely many primes.

3. (**Claim:**) For every positive integer k , there exist k consecutive composite integers.